

Use of LSD in the Haight-Ashbury

Observations at a Neighborhood Clinic

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■ *The philosophy of the Haight-Ashbury subculture is in great part dependent on the LSD-induced psychedelic experience. The Haight-Ashbury Medical Clinic in treating large numbers of patients having problems with abuse of LSD made observations on the LSD reaction and the types of LSD preparations being used among the youth of Haight-Ashbury. In addition descriptions of the acute and chronic psychological toxicity secondary to LSD are presented with recommendations for treatment and a discussion of the personality types involved. Finally the problems of potential neurotoxicity and chromosomal damage are presented.*

It is apparent that "Madison Avenue" techniques have produced a multiplicity of black market LSD preparations. The use of impure LSD in improper environmental circumstances by inexperienced or pre-psychotic adolescents has brought about a decided increase in the acute and chronic toxicity associated with this drug.

SURVEILLANCE, EVALUATION AND TREATMENT of various drug problems is one of the primary functions of the Haight-Ashbury Medical Clinic. Of great interest to the general medical community has been the use and abuse of LSD (lysergic acid saure diethylamide). Physiologically the compound acts as a sympathomimetic agent: It mimics the effects that are brought about when the sympathetic nervous system is stimulated. After LSD is taken the pupils dilate, the blood pressure rises slightly, and the pulse quickens. The physiologic effects are quite minor, however, compared with the profound psychological effects that are seen.

Psychological or Behavioral Effects

A latent period of 35 to 45 minutes follows the ingestion of an average dose of LSD (150 to 200 mg). After the initial sympathetic response, a feeling of depersonalization and loss of body image is experienced. This early response in inexperienced users may cause great anxiety, and is probably the most common cause of an acute adverse reaction or "bad trip." The subject initially notices a change in his perception of environment, with objects changing shape and color. Illusions of this nature are the most common perceptual alterations.

Hallucinations (false sensory perceptions without a basis in external reality) are rather rare with LSD and when they do occur are more accurately described as pseudohallucinations in that the per-

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son usually does not lose critical self judgment during this experience.

Another rather remarkable perceptual change is synesthesia, the translation of one type of sensory experience into another. If one is listening to music, for example, he may "see" colored vibrations of the music coming from the record player, or he may "smell" purple.

There are much larger swings of mood in the LSD user than under the effects of "traditional" drugs; a more pronounced emotional lability, and a much greater suggestability. An early stage in the LSD experience may often be euphoric. If the individual is asked, "Why are you laughing?" the answer may be, "I don't know, really, but I just feel like laughing." The euphoria, however, can rapidly change to sadness brought about by very small changes in the environment. The sight of blue sky can generate ecstasy over its beautiful color. But if the sun goes behind a cloud, the subject's mood can quickly change to one of sadness and it seems that everything in the world is turning gray. Time orientation is frequently affected, also. Past, present and future frequently get mixed up.

Accepted, normal, even trivial phenomena, seen under the influence of LSD frequently assume dramatically increased or important new perspectives. For example, a person who has taken the drug may fix upon a red rose and develop a transient, but complicated philosophy of oneness with nature and God. This "ideational" alteration in philosophy may persist into the post-LSD period and is in great part responsible for the unifying philosophy of the newly evolved psychedelic subculture.

What a person experiences while under the influence of LSD depends greatly on his personal structure, his "set" or attitude before the experience, and the environment in which the drug experience is had. Variation in these factors can greatly alter the individual drug experience.

A subject under the influence of LSD usually exhibits inappropriate affect and symbolically altered speech patterns. The latter revolve around verbal concepts of visual distortions: for example, "Wow" is a word often used when it appears that all other descriptive words fail. Verbalizations common to the LSD experience are such expressions as: "White light; clear light; I can see; I can really see; I understand" (even when it appears to an observer that there is no change in the amount or kind of light, or that there is nothing cogent to

see or understand).

LSD users often seem to themselves to be conversing on a high, philosophical level, although they may be making no apparent sense to the listener. Paranoia may be generated, exhibiting itself in fear of friends, police officers, and other real — or imagined — people who are "following" or "watching" the subject.

Different Forms of LSD "on the Street"

Referred to as "acid" on the streets, LSD has been greatly influenced by Madison Avenue techniques in its merchandising. Black market LSD manufacturers use special brand names, different shapes and colors, to differentiate their product from others. The proper treatment of an acute drug reaction depends in great part on an accurate history, and the array of exotic names can be confusing to a physician unaccustomed to treating cases of black market LSD ingestion. Many preparations containing LSD have appeared on the street with such esoteric names as "White Lightning," "Blue Dots," "Yellow Dots," "Purple Wedges," "Purple Flats," "Purple Owsleys," "Pink Dots," "Orange Wedges," "Green Caps," "Blue Caps," "Yellow Caps," "Brown Caps," "Paisley Caps" and "Pink Wedges."

Quality varies from one brand to another, both in the amount of LSD contained and the amount of contaminating ingredients, such as methamphetamine. A discrepancy also exists between the number of micrograms the dealers claim for their capsules or tablets and the amount they actually contain. The "street" dosage in micrograms (called "mics") is generally six to seven times larger than the actual clinical measurement. The "Blue Dots," for example, were claimed to contain about 900 to 1200 "mics" of LSD, but actually contained 150 to 200 clinical micrograms. A particular brand does not stay on the "street" very long in the Haight-Ashbury. Usually it is not manufactured in sufficient quantity to sustain a prolonged sales campaign. Also, when a particular brand has been accepted as "righteous" (or good) LSD, phoney copies are quickly brought out by the competition. The "Blue Dot," for example, was an aspirin tablet splashed with a blue dot on one side, probably applied with an eyedropper. After the "Blue Dot" had won consumer approval, tablets of Vitamin C or aspirin began to appear, dotted with blue food coloring or blue ink, instead of the original coloring which contained LSD.

Contamination of LSD with Methamphetamine

Methamphetamine crystals or "speed" (depending on the frame of reference) have appeared in great abundance in the Haight-Ashbury. Because of its small cost and ease of synthesis, it is often mixed with small quantities of LSD and sold as "pure acid." This mixture increases the likelihood of a "bad trip," mainly because of the intense sympathomimetic effects of the amphetamines. The tachycardia, muscle tremor and anxiety produced by "speed" are often magnified by the LSD-sensitized mind into a panic reaction. The reaction is often called a "death trip" by the user.

Psychological Toxicity

The adverse effects of LSD at present appear to be largely psychological in nature and can lead to several varieties of "bad trips." Susceptibility to "bad trips" is not absolutely dose-related, but depends upon the experience, maturity and personality of the user, as well as upon the external environment in which the trip is taking place.

The most common "bad trip" is the simple anxiety type of panic reaction. The inexperienced user is most susceptible to this reaction. The beginning changes or perceptions are often frightening, for they have little if any basis for comparison in everyday reality. A panic reaction in the more experienced user can often be credited to the high dosage he has taken.

The other kind of "bad trip" is toxic psychosis, commonly defined as a major break with reality secondary to an intoxicant. For example, the individual under the influence of LSD may have a frightening illusion of bodily distortion which suddenly seems real.

After taking the drug one can feel it has "gotten away" from him, that he no longer has control of the psychological effects he is experiencing. He wants to be taken out of this state immediately. He sometimes tries to flee the situation physically, or he may become quite paranoid and suspicious of other people, and lash out at them.

Some persons under LSD show decided changes in cognition or very poor judgment. They may have the feeling that they can really fly, and go out of windows. Some users have been reported walking into the sea, feeling they were "part of the universe." Some have described a feeling of immortality: "It doesn't matter if my body dies; my spirit

will live." This mind-body dissociation leads to a variety of problems, including accidental "suicide."

Prolonged Psychotic Reactions

Although there is no evidence of organic brain damage with LSD use, there often appears to be serious long-term personality disruption, particularly in those who have had acute adverse reactions. These prolonged psychotic reactions may look like an endogenous paranoid schizophrenic reaction, and occur most often in persons with preexisting psychological problems.

Another adverse side effect is the recurrence of the acute reaction many days, and sometimes weeks, after the drug was taken. A patient with such a "flashback" becomes quite frightened; he feels he is losing his mind. The recurrence phenomenon is relatively rare, but it becomes more common with those who take the drug frequently or have had adverse reactions. We have also seen recurrent panic reactions, long-term depressions, and long-term perceptual alterations after an acute adverse LSD reaction.

Treatment

Treatment of the acute LSD reaction should be non-punitive and aimed at providing supportive care. If the user suspects "establishment" criticisms and senses that he is being used as a guinea pig (for example, in a situation where six to nine observers are in the room) he will fight any help offered. Conversing relaxedly can help the physician in his diagnosis and at the same time put the patient at ease. Quick movements should be avoided, as they may be misinterpreted. Make the patient comfortable (let him walk around, sit down, stand, lie down, or smoke if wishes to). However, *sometimes* the patient may become more agitated when he walks around, and the simple suggestion, "Why not sit down and relax," may help calm him.

It should be noted that the pattern of LSD use differs from the psychosis pattern familiar to most physicians. The LSD user is generally from the middle class, is probably well educated, and should be approached at that level.

Techniques for Treating The Acute Panic Reaction

The acute panic reaction, as stated earlier, can be divided into two types and there are two sepa-

Personality Types and Their Relationship to LSD Toxicity

The nature of adverse reactions to LSD can only be understood in relationship to the environment in which the drug is taken and the personality type of the person taking the drug.

The Haight-Ashbury subculture can be divided into four basic groups.

1. The core-committed hippie who had a particular consistent philosophical system and his two drugs that he used almost exclusively were marijuana (the social drug) and LSD (his religious agent). Whether he achieved this religious or psychotherapeutic effect we are not in a position to comment upon; but his stated motivation for the drug was to achieve a transcendental state of religious experience, or to achieve some goal in personal analysis.

2. The sociopathic element—which contained the Hell's Angels, the Gypsy Jokers, Negro militants, methamphetamine dealers, and criminals.

3. A prepsychotic element — the Haight-Ashbury in its acceptance of anyone who will come down there on their terms attracted a

very large number of prepsychotic individuals that "could not make it" in regular society, and in fact oftentimes had a long record of institutionalization. These individuals were not particularly violent, but the particular group which can be called "the ambulatory schizophrenics" had a response to drugs which was quite disastrous, in any case.

4. The teenyboppers—we have a tremendous influx of teen-agers to the Haight-Ashbury and the teenybopper segment seems to vary with the season.

It would appear that there is a much greater incidence of acute adverse reactions to LSD in the younger, inexperienced "teenybopper" and in the "prepsychotic" element. As would be expected the prolonged psychotic reactions secondary to LSD occur with greatest frequency in those with previous history of psychiatric problems.

Unfortunately methamphetamine abuse, the major drug problem in Haight-Ashbury, dominates LSD use in the second, third, and fourth categories, heralding a trend from periodic ingestion of LSD to compulsive abuse of methamphetamine.

rate treatment recommendations. Common to both is the supportive care of the "talk down" method.

Supportive care is the recommended approach to the individual who is having panic reaction of the simple-anxiety type. The therapist using the "talk down" method reassures the patient that his distortions will end. Efforts should be made to direct the patient's attention from the environment or the mental aberrations that have precipitated the panic reaction.

Members of the Haight-Ashbury Medical Clinic staff have found that if questions *must* be asked of someone under the influence of LSD, tact is a necessity. Accusations or evidence of fear on the part of a physician or other personnel in attendance will hinder and often negate whatever constructive treatment efforts are made.

Except for a rare subject in a most advanced psychotic state, the LSD user recognizes that his condition results from ingestion of the drug, and he retains some ability to test reality. Consequently most cases can be treated without drugs in a non-threatening setting (in a police sense) and an experienced, sympathetic person must be available to "talk down" the patient. Chlorpromazine can, however, be given orally with good result, but drug

therapy alone is inadequate treatment. However, if the patient is in an advanced psychotic state or is extremely agitated, we have found chlorpromazine 50 mg intramuscularly is often required. That drug, in doses of 50 mg intramuscularly or by mouth should be repeated every hour on an as needed schedule, depending on the patient's psychological state.

The "Pink Wedge" Incident, Mass LSD Toxicity and Uncommonly Used Hallucinogens

An instructive example of mass LSD toxicity was observed by the Haight-Ashbury Medical Clinic staff on November 11, 1967, when the "Pink Wedge" was dumped on the market in San Francisco. The pink tablet had sloping edges and was said to contain 1,000 mg of LSD. Chemical analysis proved that the tablet contained 270 mg of LSD and 900 mg of dimethoxymethyl amphetamine. This latter compound is called "STP" on the street (for Serenity, Tranquility and Peace) and is a long-acting hallucinogen producing a much higher incidence of adverse drug reactions.^{1,2}

We treated 18 patients with acute toxic psychosis

generated by the "Pink Wedge" in a five-hour period. Most of them were having severe panic reactions due to the strength of the preparation, which was more than most of the young persons had been used to.

The patients felt anxious and were unable to think clearly. Some thought that the visual distortions they were experiencing were the way everyone perceived his environment. One girl felt that her hand was purple and that it would remain purple even after she "came down." Reassurances by the clinic staff that this was simply a drug effect alleviated her anxiety. Some of the patients indicated that they felt physically depressed, even though they were not tired, and indicated they felt quite isolated from other people—even from those present who were also under the influence of the "Pink Wedge"—which was an unusual reaction.

Nearly all had a memory lapse, and after they were treated some of the patients returned to the clinic to ask what had happened to them during their trip.

Chronic Physiological Toxicity

At present there is no documented proof of "organicity" after the use of LSD, although certain investigators have described electroencephalographic changes in isolated cases. Some investigators have suggested that "organic brain damage" accounts for these EEG alterations. However, Silverman³ reported that EEG changes in some chronic LSD users do in fact appear; however, his work with "sensory-perceptual functioning" and EEG "cortical-evoked responses" are not characteristic of brain damage, but suggest other "brain changes" similar to those seen in schizophrenia.

The major debate at present relative to physiological toxicity, however, began when Cohen⁴ reported LSD-induced chromosome deformities in tissue culture and alerted the public to the possible correlation of LSD and birth defects. Following this discovery, chromosome breaks were noted in the peripheral white blood cells of persons who had taken LSD.^{5,6}

Of greater significance was that the chromosomal breaks in LSD users seem to persist, in contrast to the transient chromosomal breaks seen in such conditions as acute viral infections. The issue was clouded, however, after Loughman⁷ found no significant difference in the number of chromosome breaks between the LSD user and appropriate controls. Other negative studies have been published

and at present there is no satisfactory answer to the question, "Does LSD cause permanent chromosomal damage?"

To confuse the issue further, Cohen, in one of his lectures, described chromosome breaks in persons who had taken amphetamine and chlorpromazine. As the potential for chromosomal breakage has not been evaluated for many drugs, the scientific community must begin the tedious task of studying many therapeutic agents in common use. While this debate was raging, Alexander⁸ reported that LSD given to rats in the first trimester of pregnancy produced birth abnormalities in their offspring. Similar observations were made by Auerbach and Rugowski in mice⁹ and by Geber in hamsters.¹⁰

Recently, Zellweger and coworkers¹¹ reported a birth abnormality in a woman who had taken LSD in the first trimester of pregnancy. However, such an uncontrolled case does little to answer the second major question, "Does LSD lead to birth abnormalities?" Two percent of women give birth to deformed infants naturally and at the clinic no significant increase in infant deformity has been seen although almost all the mothers treated have taken LSD. Only a controlled, large-scale study will answer the question, and the reporting of a single case seems only to add to the confusion.

At present it is obvious that a pregnant woman should not take LSD—but then she should also be cautioned against taking any medication while pregnant, other than those prescribed for specific medical purposes.

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